

tma news bulletin

THE VOICE OF ILLINOIS MANUFACTURING

MANUFACTURING & NEW MEDIA

IF YOU BUILD IT,
WILL THEY COME?





tma news bulletin

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technology & manufacturing association

The Technology & Manufacturing Association (TMA) was founded in 1925 by eight small manufacturing companies who believed they could better themselves by associating with one another. Through the years, members established programs and services that would help their businesses grow and prosper, train their employees, and provide medical and retirement benefits. As a result of these efforts, TMA has grown into a not-for-profit organization of precision manufacturing and supplier companies in the greater Chicago area.

TMA is governed by a Board of Directors, composed of executives from member firms. A full-time professional staff works closely with the Board, its committees and trust.

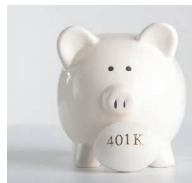
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message from the president



Dear TMA Friends,

From the point of view of a “new” President with no manufacturing background, one of the biggest challenges we face as members of TMA today is the public perception of manufacturing. Time and again when I talk with elected officials and government decision makers they are still under the impression that manufacturing in the Chicago metro area is a “dying” industry.

During the last two recessions, report after report of the loss of manufacturing jobs has created a pervasive meme that manufacturing in the U.S. is on the ropes and everything in the future will be made in either Mexico or China or the far East. Even the ongoing narrative of the current US Presidential primaries seem to herald an immediate crisis that only the federal government can solve.

Lost in all of this hand-wringing is the astonishing improvements in U.S. manufacturing productivity, the amazing innovation taking place, and the consistent commitment by domestic manufacturers to ongoing process improvement.

We all understand the advantages of U.S. domestic manufacturing: just-in-time delivery, consistent quality, dependable material content, logistical advantages, the current energy dividend. Our problem is that the elected leadership of our area doesn't. The parents of the next generation of manufacturing workers don't. The traditional media doesn't.

This month we turn to the subject of “Manufacturing and New Media”. Our exciting opportunity is to use the evolving new media to tell our story and highlight the incredible transformation of Chicago area manufacturing; to share the strengthening employment market and the near-term opportunities to build a career “making chips.”

As we find our way in a society that increasingly gets its information electronically, we have the opportunity to show what manufacturing is today. It will be a challenge. However, together, through TMA, the generation of companies and manufacturing leaders that overcame NAFTA and met and overcame the competition from China are up to the challenge.


Steve Rauschenberger

cover story

MANUFACTURING & NEW MEDIA

IF YOU BUILD IT, WILL THEY COME?

“People will come, Ray. They’ll come to Iowa for reasons they can’t even fathom. They’ll turn up your driveway not knowing for sure why they’re doing it.”

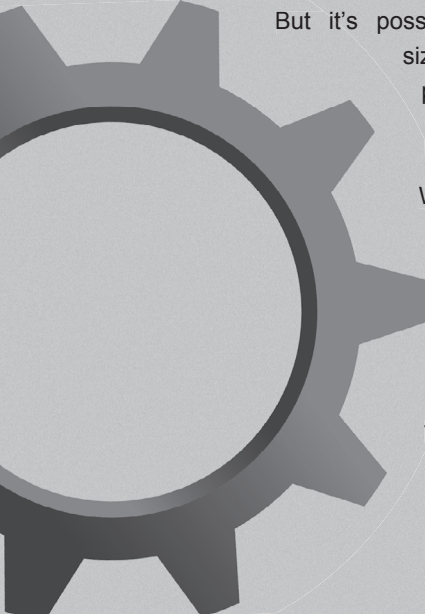
~ Terence Mann to Ray Kinsella in “Field of Dreams.”

Like baseball dreamers that hear that haunting voice say, “You build it, they will come,” business owners diligently work year in and out, hoping curious prospects and satisfied customers will appear out of nowhere, simply because of what they’ve built.

But every manufacturer will admit that clients rarely, if ever, just show up.

In addition to well-developed networks and personal relationships, more and more are finding profitable connections by implementing the power of the Internet.

Many large manufacturers have the resources to hire full-time staffers to focus on developing their companies’ online presence. But for the vast majority of smaller businesses, it’s a major accomplishment to develop a website and a LinkedIn or Facebook page – much less grow Twitter and Pinterest followers.



But it’s possible for manufacturers of all sizes to have productive website presences and these days, it is absolutely necessary, says TMA affiliate member Mike Weber of MLW Marketing.

“In the 10- to 25-person shop range, many of those shops consist of owners that are doing some of their company’s work themselves, while managing and marketing their businesses at the same time,” Weber told *TMA News Bulletin* in a recent

interview.

Online marketing for small businesses should focus on key aspects accessible to the busiest owners: how a website is structured and updated, what the site contains and how to manage customer and prospect outreach.

A well-crafted website is crucial

Regardless of the size of the business, an up-to-date website is crucial. A well-crafted website can effectively position and differentiate a company and showcase its core competencies, generate new business, highlight career opportunities, and much more, Weber said.

A website should educate prospects and customers about capabilities and products companies offer – which can save valuable time and resources for both interests involved.

“An effective website provides a company with the ability to uncover new opportunities for business – everything from generating inquiries, to RFQs to prequalifying prospects,” Weber said.

A mobile-friendly website is necessary

Websites should have adaptable architecture that allows them to be viewed on smart phones, tablets and the growing array of mobile devices.

Mobile accessibility affects where a company’s website is listed on Google searches – the Yellow Pages of 21st Century marketing. Not being mobile-friendly penalizes a website and a company’s placement on Google search listings.

“For a successful web presence, ideally, a company wants to be on the first page of search results,” Weber said.

Chicago Waterjet, Inc. can testify to the importance of high listings on web search engines for their small business in Elk Grove Village. A movie production company found them through Google when they were in town making the latest Transformer movie.

“We got a call from a person associated with the film’s production, needing us to cut a sword they would use CGI with,” Justin Murlowski, the shop foreman, told TMA.

To be located among the top results on a particular Google search, a website needs to be optimized for search (Search Engine Optimization or SEO). Attention to SEO helps insure that a site can be found. Analytics provide data points to determine the source of the traffic.

“There are strategies and best practices that impact search rankings,” Weber said, “and a key driver includes depth of relevant content on a website - content that it is refreshed, added to and updated continually.”

Good content attracts curious prospects

Websites can now be easily updated through content management systems that allow owners to make website content changes without enlisting professional website developers.

The more interesting and appealing a site’s content, the more viewers will visit (assuming the site is well optimized and can be found). It’s important to understand your customers in order to know what those in a particular industry segment will be interested in learning more about.

“Content marketing can achieve many goals. It can attract links, serve as an organic search landing page, move customers further along in the sales cycle (from awareness to consideration, consideration to short-listing, etc), increase customer success and lifetime value and more,” says Matt Gratt, a customer acquisition strategist at BuzzStream.

Digital photos and videos of the company and personnel, audio recordings of conversations with company leaders and staff, graphics about the company’s work, white papers on procedures and techniques, personnel profiles and updates about the company and projects are popular means of content.

Showcase with social media

A growing number of social media venues are available for manufacturers to open a dialogue with other manufacturers, customers and prospects. The more engagement, the more a company attracts past and potential clients - a means to the goal of more business.

Facebook, Twitter, YouTube, Linked-In, Snapchat and Pinterest are just a few of the over 90 social media platforms currently available. Each one is a way to draw attention back to a company’s expertise and services. Finding the right audience and tapping into those social networks can be a challenge, but marketing through social media is crucial.

Online sources, such as www.SocialMediaToday.com, are chocked full of ideas on how to learn and beef-up social media outreach.

continued on page 12





member profile
Alex Curtiss
Engineered Plastic Products

By Fran Eaton

ELK GROVE VILLAGE – Alex Curtiss launched Engineered Plastic Products in 1976 after being a manufacturing sales rep for several years.

“At that time, almost all plastics were being done by metal machining companies. My partners and I represented primarily plastic companies,” Curtiss said.

Not one of the companies he worked with at the time focused solely on plastics machining. That glaring industrial omission presented him with an opportunity to fill the void – something for which smart entrepreneurial-types are always looking.

“Plastics specialists exist for a reason,” Curtiss told TMA’s News Bulletin. “A lot

of metal shops are doing plastics and they really don’t have the technology and knowledge about plastics to do it properly. While the machinery is the same, plastics take different speeds, feeds and tooling.”

And those differences between metal and plastics can lead to baffling product malfunction.

“Very few houses exclusively work on plastics,” Curtiss said. “There are some plastics that also do metal, but plastic machining should never be done in a metal machine shop.”

Those words are likely to be provocative among metal precision machinists, but Curtiss ably defends his view with examples from two companies that ran into

problems because they didn’t recognize how detrimental mixing metal and plastic machining can be.

An acrylic manifold company called Curtiss a few years back, concerned that a product was not functioning correctly a short time after being put into use. The customer suspected a static electricity issue was developing.

“It’s really odd because the manifold goes out into the field, and two or three weeks later, the ball hangs up,” he told Curtiss. “How would it develop a negative charge?”

The company sent the problem manifold to EPP for inspection, and Curtiss examined it with a magnifying glass. He found tiny imperfections roughing up the surface

inside one of the manifold's drilled holes. Curtiss asked a few more questions, and found the metal machinist that was drilling the manifold holes used petroleum-based cutting oil, which attacked and eroded the plastic over time.

That was why the problem wasn't showing up for weeks.

"Because we work only with plastics, none of our machines have traces of petroleum-based cutting oil," Curtiss said. "We use special lubricants and none of them use petroleum."

Another customer in Ohio that manufactures analytical equipment for scientific and medical research built a two million dollar medical instrument that after a brief amount of time developed a short circuit, rendering it useless. The engineers could not figure out why it suddenly stopped working.

After dismantling the machine and x-raying its parts, they found the culprit to be a plastic part in which a sliver of metal accidentally embedded during the machining process. The supplier that produced the plastic part machined both plastics and metal in their facility.

Most plastic components tend to be molded, which is generally more cost-effective. Plastic machining is necessary when a plastic product cannot be molded due to its design, precision required or the quantity needed.

"The industries we serve are instrumentation, medical equipment, aerospace, some oil and gas, and some water treatment," Curtiss said. "The one thing those companies have in common is that the components they need are not high volume. They use hundreds of parts per year or maybe a thousand, but they will never get to the point where they are ten thousand parts," which begins to economically justify the molding process.

While metal and plastics machining are similar, there are major differences between the two.

"Metal machining companies do plastics, but, according to people I've talked to, they do it reluctantly. They do it to hang onto the customers, and I totally understand that," Curtiss said. "But when you talk to them in private moments, the majority will say, 'We don't really like machining plastics.'"

And when metal machinists start working at EPP, they often hesitate to work on plastics. EPP finds they need to train on the material's idiosyncrasies.

More and more, designers are turning to plastics as a non-corroding alternate to the much more expensive stainless steel option. Plastics also offer high weight to strength ratios. Plastics now can be specially formulated to withstand high temperatures and high pressures, and some plastics have self-lubrication abilities or high impact levels.

The four decades-old EPP now has 15 employees and is housed in its second location at a 10,000 square foot Elk Grove Village facility. Curtiss says more and more EPP is networking with area metal precision shops that have projects requiring plastics machining.

"We tell our customers that we'll spend their money like it's ours," Curtiss said, slipping back naturally into his former sales rep persona. "We'll look for the most efficient way to produce parts with the lowest possible cost and with the highest possible performance."

The company provides extensive information on their website at www.EPPCorp.com about plastics materials and services they offer.

EPP is located at 2542 Pratt Boulevard, Elk Grove Village, IL 60007. ●



TMA 401(k) TRUST FUND PREPARES FOR THE FUTURE

Engages New Trusted Advisor | Fund Administrator

SCHAUMBURG - In a time when the news is full of headlines about the mismanagement and crisis in many public- and private-sector pension funds in, it should be refreshing to hear about a solid, well-managed 401(k) trust fund like the one run by your Technology & Manufacturing Association.

TMA's decades old 401(k) Trust Fund has just completed an intense, year-long process of updating mandatory reports, contracting with a new Trusted Advisor, and evaluating the Fund's financial status.

"We're happy to announce the process of evaluation has been completed, and the TMA Trust Fund is in good health and ready to continue providing needed services for our associates and their employees," said David Long, Chairman of TMA's 401(k) Board of Trustees.

Overseeing the process were the six members of TMA's 401 (k) Trust Fund Board, TMA President Steve Rauschenberger, along with TMA's Director of Accounting Orlando Pastore and associate Mike Foltyn.

"We've just completed a 13-month effort to refresh all the needed files and update the Department of Labor reports for each of the companies that are a part of the Trust

Fund," TMA President Steve Rauschenberger said.

Over 50 manufacturers and their 1,600 employees currently participate in TMA's 401(k) Trust Fund, which, the 2016 fiscal review showed, has now reached the \$100 million level.

Under IRS rules, a Trust Fund must maintain benefit agreements with each of the participating companies. A Fund is also responsible for making sure all the employees of the individual companies are aware of required "safe harbor" provisions, and they must file 5,500 tax reports to the Department of Labor each year for each participating companies' plans.

Members involved in the TMA Trust Fund are spared much of the burdensome paperwork required by the federal government.

The Department of Labor published new regulations two weeks ago with which all companies offering 401(k) programs must comply. Due to recent updates, Rauschenberger said TMA's Trust Fund is fully compliant with the latest regulations and ahead of schedule.

As part of the update process, the TMA Trust Fund moved to a different Trusted Advisor that will save the Fund over \$100,000 each year in fees. TMA's new Trusted Advisor is Rothschild Investments.

Currently each company contributes a quarterly fee to

TMA 401(k) BOARD OF TRUSTEES

David Long (Chairman)
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Mark Ziegenhorn
Matrix Tooling, Inc.

Tim Merrigan
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Pam Simantz
AJR Industries, Inc.

Paul Prikos
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Sko-Die, Inc.

be a part of the Trust, along with a small per participant fee. For that fee, the 401(k) Trust trustees – who are all participants in the Trust themselves – oversee the investment portfolio, make sure the member’s plans are in compliance with the law and is up to date in any legal disclosures.

“The only requirements that a participating employer is liable for is to appropriately enroll new employees and make their contributions in a timely fashion,” Rauschenberger said.

Mike Foltyn, who was an auditor with Sears Holdings and Kmart for over 30 years, worked directly with each of the TMA 401(k) member companies to update their plan documents.

Foltyn told the *TMA News Bulletin* that being involved

in the TMA’s substantial 401(k) Trust of 50 companies provides more buying power than individual, smaller companies are able to negotiate.

“And because the trustees are TMA members from the same industry, the investment options are better suited for manufacturing industries,” Foltyn said.

Plan administrators also reduce pension benefit liability for individual companies, he said.

The TMA 401(k) Plan allows each participating company its own flexibility in the agreements it makes with company employees, and the members are provided access to fiduciary expertise of the TMA 401 (k) Trust Board of Trustees, as well as Rothschild Investments.

“With a new Trusted Advisor, a new investment plan, and over \$100,000 in cost savings - the TMA 401(k) Trust Fund is not only alive and well, it’s better than ever,” Rauschenberger said.

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TMA PEER GROUP: HUMAN RESOURCES

ALSIP - Every other month, on the third Thursday, Human Resource representatives from TMA membership and affiliates gather to discuss challenges they face and to hear suggested solutions from HR experts.

In April, TMA's HR Peer Group opened the discussion by listing personnel issues they were facing, such as finding skilled workers, matching skills with applicants, hiring the right people for their companies and working through the hiring regulation maze.

In the afternoon session in south suburban Alsip, four guests were on hand with TMA's Ben Pyzdrowski and Suzanne Henn to answer questions and suggest solutions, each from his or her own expertise.

Abby Cheesman of Skill Scout addressed the challenges of finding people to hire that have the needed skills and experience and are good fits for a company's culture.

"It's about making your story come to life," Cheesman said.

Skill Scout encourages companies to use YouTube and make videos to introduce their environment and employees to potential job seekers. They also suggest applicants use the same media to offer nearly in-person job interviews via the Internet.

"Sometimes when companies present a behind-the-scenes look, and introduce the

work and the people, applicants determine for themselves whether the company does the type of work they are familiar with, what they are trained to do and whether the pace is something with which they would be comfortable," Cheesman said.

And once a potential applicant is found, next is the official interviewing process.

Maureen A. Murphy of the law firm Kopon Airdo, spoke to that aspect of hiring.

Murphy explained the importance of preparing for an interview by determining which company staff will conduct the interview, and make sure that person is well-versed on what he or she can and cannot legally ask during an interview.

"Have prepared, written questions and use them for all being interviewed for a particular position," Murphy told the group. "Take notes during the interview that are objective and professional, and keep questions tied to the job description."

Interview questions designed to get information about a person's age, sex, race, sexual orientation, arrest record or disabilities are not allowed. Nothing about a job candidate's financial status, family or religion may be asked – or a person's pregnancy or plans to have a family.

Interview paperwork should be kept for three years, and it should become a part of that employee's personnel records.

But before offering the job, more and more

employers are tapping security experts to conduct background investigations. Smart hiring decisions can increase productivity and profitability, but poor ones can cost thousands of dollars, result in lost productivity and profitability.

CLS Background Investigations' representative Dan Skoczylas told the group Illinois' new "ban the box" law restricts potential employers from inquiring about applicant's arrest records, but conviction records may still be researched before hiring.

"Employers need to be acquainted with hiring procedure developments such as 'pre-adverse action notices,' and 'adverse action notices,'" Skoczylas told the group. "And be reminded that people have to sign off on background checks for employment or tenancy."

Finally, Bailey Warren from "1,000 Jobs Chicago" shared their non-profit group's service of lining up skilled machinists and manufacturing workers with potential employers.

"We collaborate with several networks to find the type of worker you say you need. We're a free service, funded by public-private investors," she said.

1000 Jobs screens applicants to determine skills and match jobs throughout a seven-county region. They boast an 85 percent retention rate with their clients. ●



Suzanne Henn, TMA's Member Value Manager, kicks off the HR Peer Group in Alsip, Illinois

Illinois House of Representatives and Chicago City Council Recognize TMA



(L-R) John Rauschenberger, Zach Mottl, Mayor Rahm Emanuel, Greg Sweigert, and TMA President Steve Rauschenberger

The Technology and Manufacturing Association (TMA) was recently honored by both the Illinois House of Representatives and the Chicago City Council.

Both governing bodies passed resolutions marking the Association's 90th Anniversary.

The recognition came on the heels of a similar resolution passed last month by the Cook County Board of Commissioners.

The House Resolution was sponsored by State Representative Marcus Evans, Jr. (33rd District), while 36th Ward Alderman Gilbert Villegas sponsored the City Council Resolution.

"Manufacturing is a vital part of Chicago; and TMA has done terrific work ensuring that remains true for decades to come. I applaud TMA for the work they have done and I look forward

to working closely with them in the future," stated Alderman Villegas.

The resolutions state in part, "TMA has served as a valued source of employee learning and development for member companies and has evolved into a leader in hands-on training and workforce development by continually expanding the scope of TMA's educational offerings to meet the evolving needs of its members and manufacturing students of all walks of life."

"TMA is honored to have been recognized by the Chicago City Council and the Illinois House, and we look forward to 90 more years of serving manufacturers and their employees throughout Illinois," said TMA President Steve Rauschenberger. ●

continued from page 5

Manufacturing & New Media **If you build it, will they come?**

E-mail remains a viable tool

E-mail marketing is an effective tool to create frequent touch points among customers and prospects, to build and maintain awareness, and to generate traffic to a website, Weber said.

“E-mail marketing systems provide a way to track activity and evaluate the ROI. There’s a myriad of options with definitive results,” he said.

But all these efforts still point back to the foundation of what a company is, what that company has to offer, and what makes it unique.

A TMA member for 13 years, Weber says while methods and tools have evolved, the core principles of marketing remain the

same.

“Platforms have greatly expanded from direct mail and trade journal advertising in the 80s, but company branding, positioning and targeting remain paramount,” Weber told TMA.

Building and growing a business goes hand in hand with a consistent marketing effort, he said.

“The company should decide who they are trying to reach, who they are as a company and what makes them unique, and then use the appropriate mix of tools - including web, print and public relations - available to achieve their marketing objectives,” Weber said.

However, it’s ultimately the companies’ job to build their businesses, their reputations and their messages.

And despite that memorable speech in “Field of Dreams,” it takes more than

building a dream. It takes using every resource available to let the ones who are interested in what a company is offering to let them know it’s there. ●



For more information, contact Mike Weber of MLW Marketing, Inc.
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tma | training

JUNE - JULY

2016 PRECISION MACHINING COMPETITION



On May 12th, TMA held its 25th annual Precision Machining Competition (PMC). This event, featuring over 200 projects by students from 12 area high schools, honors excellence in precision machining skills. This event would not be possible without the generous support of our members. TMA would like to sincerely thank the sponsors of the 2016 Precision Machining Competition:

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JUNE 2016

Spanish Basic Blueprint Reading

6/4 & 6/11 8:00am – 4:00pm

This 16-hour introductory program explains the importance of engineering drawings in manufacturing and describes how drawings are portrayed and information communicated. **Please note: This class is being offered with a bilingual instructor; course materials are in English.**

Internal Auditing

6/9 & 6/10 | 8:00am – 4:00pm

This workshop focuses on establishing and integrating an effective internal auditing process and initiative, with a significant emphasis on understanding and utilizing practical auditing techniques.

Advanced G Code Programming

Tuesdays & Thursdays, 6/28 – 10/13 | 6:00pm – 9:00pm

Students will build upon topics covered in the introductory course and learn advanced G code techniques in this project-based class. Students will select proper tooling, make fixtures, write, run and verify G code programs, and inspect to print specifications.

JULY 2016

Forklift Safety

7/11 1:00pm – 4:00pm

This 'Train the Trainer' program will help clarify OSHA regulations covering forklift safety and operation. Participants will leave the session equipped with the knowledge and resources to train their forklift operators.

tma | events

MAY 26

TMA Related Theory Graduation

Join TMA Related Theory students in celebrating their graduation from the program. The ceremony and celebration dinner will take place at The Stonegate in Hoffman Estates.

TIME: 5:30pm - 9:00pm

COST: \$80 (dinner included)

LOCATION: Hoffman Estates, IL

JUNE 1

TMA Young Leaders Luncheon

TMA Young Leaders and Kutchins, Robbins & Diamond, Ltd. are hosting a luncheon with former Baxter International Chairman & CEO Harry Kraemer, who will speak on values-based leadership.

TIME: 11:30am - 1:30pm

COST: \$40/person

LOCATION: Addison, IL

JUNE 2

Workplace Safety & Security Panel

The TMA Supplier Network Committee is hosting a Workplace Safety & Security Panel focused on OSHA, workplace violence, computer security, and electronic surveillance. Experts from Mostardi Platt, CLS Enterprises, Prescient Solutions and Kopon Airdo, LLC will present.

TIME: 5:00pm - 7:30pm

COST: \$45/person

LOCATION: TMA Schaumburg

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McLaren Photographic, LLC

JUNE 3

Championing Women in Manufacturing

Join women manufacturers and leaders at the Digital Manufacturing Design and Innovation Institute (DMDII) in a half-day of conversation and networking.

TIME: 9:00am - 1:30pm

COST: \$50/person

LOCATION: Chicago, IL

JUNE 9

Lunch & Tour: Frain Industries

Frain Industries has been the leading provider of certified, pre-owned packaging and processing equipment since 1981. It fulfills 1,200 successful projects per year offering a variety of solutions.

TIME: 11:30am - 1:30pm

COST: \$35/person

LOCATION: Carol Stream, IL

JUNE 10

Women in TMA: Conversations & Cocktails

Join other women manufacturers for an informal gathering to network, and to share thoughts and good cheer. Manufacturers only.

TIME: 3:00pm - 5:00pm

COST: \$40/person

LOCATION: South Barrington, IL

JUNE 14

TMA Safety Peer Group

Join your peers for the TMA Safety Peer Group. This month's topic is "Forklift Training."

TIME: 11:30am - 1:30pm

COST: Free

LOCATION: TMA Schaumburg

JUNE 15

Roundtable with TMA Chairman Carr

Join other manufacturers in the Schaumburg area for cocktails and a group discussion around relevant issues of being a smaller manufacturer in Illinois.

TIME: 5:30pm - 7:00pm

COST: Free

LOCATION: Schaumburg, IL

JUNE 29

New Member Breakfast

We invite all 2016 new members to join TMA for breakfast and a tour. Come meet your staff and check out the resources available to you as a member.

TIME: 7:30am - 9:00am

COST: Free

LOCATION: TMA Schaumburg

tma | new members

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Jason Zenger (left) and Jim Carr of "Making Chips" Podcast

Manufacturing & New Media

Podcasting and Video

PODCASTING

"If you're not making chips, you're not making money ..." Jim Carr's dad used to say at the end of the day. And hearing those words every day inspired the name of an exciting new resource for anyone interested in manufacturing.

Indeed, the "Making Chips" podcasts cover topics from "soup to nuts" with an upbeat, inspirational tone set into place by interviewers Jim Carr of CARR Machining and Jason Zenger of ZENGER Industrial.

"Making Chips" just recorded its 65th podcast on which Carr and Zenger interview manufacturing leaders, discuss business best practices and feature experts in a variety of different categories from marketing to CAM to exporting to communication to HR to skills training and more.

Carr and Zenger – who are both now serving on TMA's Board of Directors – are informative and entertaining as they develop their online following.

In recent podcasts, Carr shared practical information on how he sold a CNC milling machine on eBay, and gave tips on how to use the online shopping source to move out no longer needed shop equipment.

In another podcast, Carr and Zenger interviewed TMA affiliate Scott McPherson about the need of small and large companies to prepare themselves on how to best respond to unexpected crises.

"Know that a crisis will happen at some point," McPherson said. "It's just a question of how big it is or how small it is. The trick is being prepared." McPherson goes on to number a "must do" list before a crisis hits.

In other more technical episodes, ISO International Standards, CAM software and manufacturing robotics are discussed.

To listen to your first "Making Chips" podcast, visit www.makingchips.com.

VIDEO

Skill Scout is a three-year-old business that produces two to three minute YouTube videos to attract hiring companies to potential applicants and introduce company culture to possible job applicants.

"Skill Scout helped us attract and hire talent that would never have known about Bi-Link," Kris Kent of Bi-Link said about video job advertising.

Video job ads are viewed 46% more and 3X longer than traditional ads. 91% of candidates believe company brand plays a key role in whether or not to express interest in that company.

And not only that, Millennials – the age most manufacturers are reaching out to – use the Internet as their main source of communication.

Skill Scout creates videos, photos and other formats to attract talent. They then build a campaign to share a company's story on social media platforms. Then they launch a campaign to drive applicants to the company page. They screen for the top three to five applicants and send them on to the company.

And from the other perspective, job applicants are able to demonstrate their skills and knowledge to hiring companies via videos.

Learn more at www.skillscout.com. ●



Abby Cheesman (center) and Elena Valentine (right) of Skill Scout



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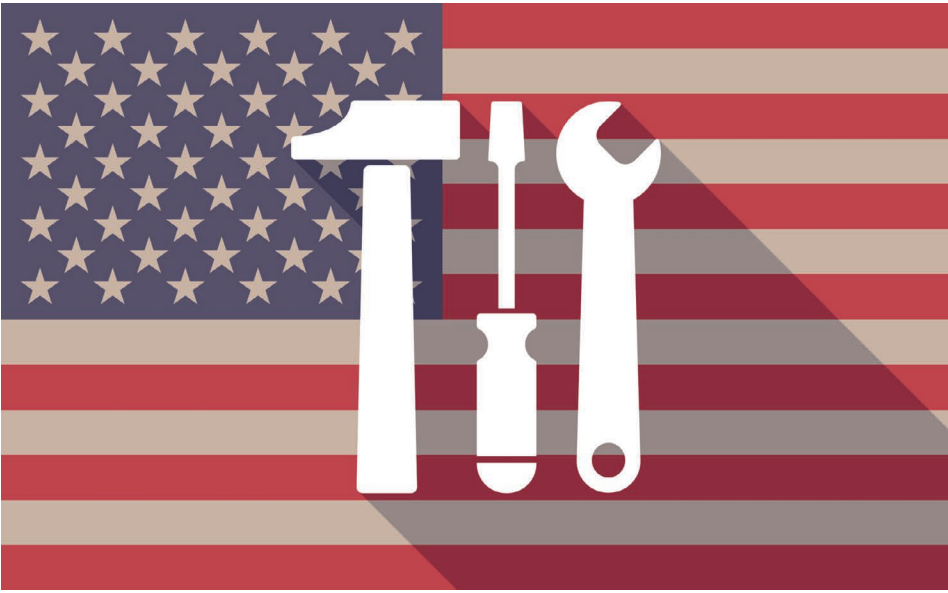
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Survey: Manufacturing Expands Again in April

By Andy Szal

The nation's manufacturing economy continued to expand in April, according to the latest monthly Institute for Supply Management analysis.

The Manufacturing ISM Report On Business showed a Purchasing Managers' Index of 50.8 percent. Although the index was down 1 percentage point from March's

PMI, a level of more than 50 percent reflected a growing economy for the second consecutive month.

The indexes for new orders, production and inventories, however, were also down compared to March, and while the employment index climbed from 48.1 to 49.2 over that span, it again fell short of the 50 percent threshold indicating workforce expansion.

Export orders showed growth for the second straight month in April, rising 0.5 percentage points to 52.5 percent, while order backlogs also climbed for two months in a row.

April's PMI indicated growth for the 83rd consecutive month in the broader economy.

Bradley Holcomb, chairman of the ISM Manufacturing Business Survey Committee, said that manufacturing would likely remain resilient "if the dollar continues to behave itself." A strong dollar — which makes U.S.-made goods more expensive abroad — hindered manufacturers for much of last year, but the currency eased to begin 2016.

Of the 18 manufacturing sectors tracked by the group, 11 reported growth, led by wood products, printing activities, paper, plastics and rubber, primary metals, fabricated metals and chemicals.

Petroleum products continued to struggle as the sector led the four contracting industries last month, while transportation equipment and furniture also saw declines.

Andy Szal is a digital reporter for www.manufacturing.com, where this was published first.

Study Shows Manufacturing Demand for Natural Gas Will Grow

The National Association of Manufacturers (NAM) has released a new study that reveals how natural gas has strengthened manufacturing and encouraged U.S. manufacturing growth and employment.

"Over the next decade our nation's demand for natural gas is only going to grow and much of that growth is from manufacturing," said NAM President and CEO Jay Timmons.

Key highlights from the study:

- Natural gas access contributed to 1.9 million jobs economy-wide in 2015.
- Shale gas put an extra \$1,337 back in the pocket of the average American family.
- New natural gas transmission lines meant more than 347,000 jobs, with 60,000 in manufacturing.
- Total natural gas demand is poised to increase by 40 percent over the next decade. Key drivers will be manufacturing and power generation.
- U.S. supply is expected to increase by



48 percent over the next decade to meet new demand.

- Because energy innovation is lowering production costs, NAM expects energy-intensive industries such as chemicals, metals, food and refining to outperform the U.S. economy as a whole through 2025.
- Shale gas production has created new flow patterns that are causing existing pipelines to reverse flow and will necessitate the construction of new pipeline capacity.

U.S. Department of Energy Requests Proposals for New Institute to Boost Efficiency in Manufacturing

WASHINGTON — The Energy Department is requesting proposals for a new Clean Energy Manufacturing Innovation Institute as part of the Administration's broader National Network for Manufacturing Innovation (NNMI), which drives collaboration between small- and medium-sized companies, academic institutions, industrial research organizations, and national laboratories.

The Modular Chemical Process Intensification Institute — the fourth led by the Energy Department within the NNMI — represents a critical step in the Administration's effort to double U.S. energy productivity by 2030. It will focus on developing breakthrough technologies to increase the energy efficiency of manufacturing processes used across an array of U.S. industries, including ethylene for plastics and biofuels used in sustainable transportation. Concept papers for this \$70 million funding opportunity announcement are due June 15.

DOE currently leads three NNMI institutes and each is a public-private partnership serving as a regional hub bridging the gap between applied research and product development in key technology areas that encourage investment and production in the U.S. They include PowerAmerica at NC State University, which focuses on advanced power electronics technologies and the Institute for Advanced Composites Manufacturing Innovation (IACMI) located in Knoxville, TN, which focuses on advancing fiber reinforced polymer composites. The third institute will focus on Smart Manufacturing and is currently in merit based solicitation review. The selected team will be announced this summer.

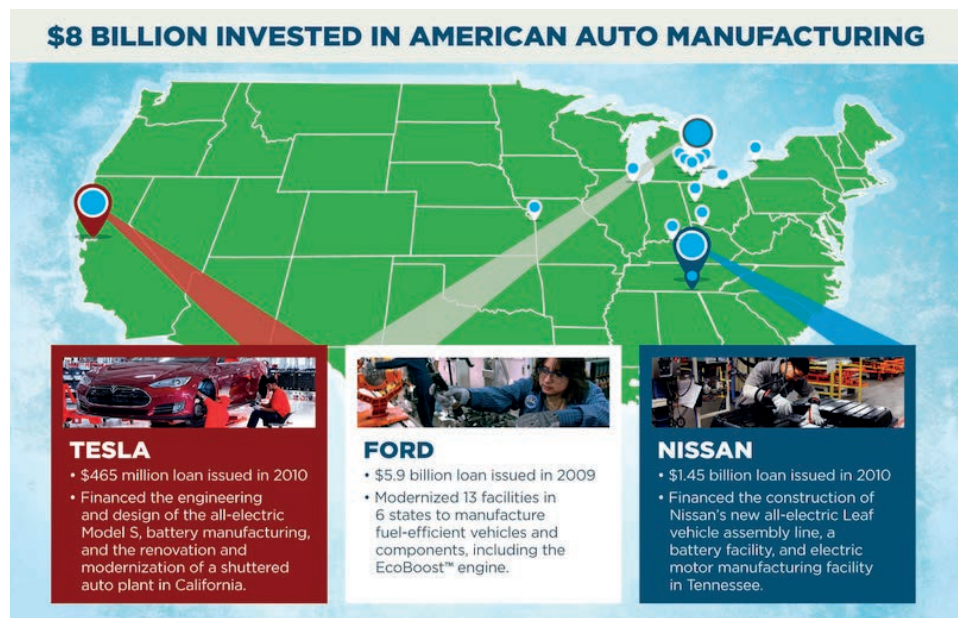
"Our National Network for Manufacturing Innovation Institutes are key to boosting

America's competitive edge in the global race for clean energy," said U.S. Secretary of Energy Ernest Moniz. "This new institute will help America maintain its leadership in developing chemical manufacturing processes that can make our industries more energy efficient, protect our air and water, and help reduce the impacts of climate change."

Traditional chemical manufacturing relies on large-scale, energy-intensive processing. The new institute will leverage approaches to modular chemical process intensification — like combining multiple, complex processes such as mixing, reaction, and separation into single steps — with the goal of improving energy productivity and efficiency, cutting operating costs, and reducing waste. Through the development of new process intensification technologies, the institute could unleash major savings in energy-intensive sectors like chemical manufacturing, oil and gas refining, pulp and paper-making, food manufacturing, biofuels, fuel cells, and other industries.

In addition to today's request for proposals, the Department is announcing that the topic of the fifth Energy Department-led institute will be Reducing Embodied Energy and Emissions of Manufactured Materials, focused on lowering energy use through the development of innovative recycling and remanufacturing technologies. More information about the fifth institute will be announced by the end of May 2016.

Collectively, the federal government's commitment of nearly \$600 million to the eight awarded NNMI Institutes has been matched by over \$1.2 billion in non-federal investment from across industry, academia, and state governments. The NNMI Institutes, each led by manufacturing experts renowned in their field, have attracted over 800 companies, universities, and non-profits as members of the NNMI. To learn more about this funding opportunity announcement, visit Energy.gov. •



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